

CLAIMS

- 1 1. A video object encoding system, comprising:
2 an object evaluation system that evaluates a video object using a predetermined
3 criterion; and
4 a mask generation system that generates one of a plurality of mask types for the
5 video object based on the evaluation of the video object.
- 1 2. The video object encoding system of claim 1, wherein the plurality of mask types
2 includes a pixel-based mask, a bounding box mask, and a macroblock-based mask.
- 1 3. The video object encoding system of claim 1, wherein the predetermined criterion
2 examines a shape of the video object.
- 1 4. The video object encoding system of claim 1, wherein the predetermined criterion
2 examines a texture of the video object.
- 1 5. The video object encoding system of claim 1, wherein the predetermined criterion
2 examines motion information regarding the video object.
- 1 6. The video object encoding system of claim 3, wherein the predetermined criterion
2 includes whether the video object shape is substantially circular.

1 7. The video object encoding system of claim 3, wherein the predetermined criterion
 2 includes whether an area of the video object shape is substantially similar to an area of a
 3 generated bounding box.

1 8. The video object encoding system of claim 7, wherein the predetermined criterion
 2 includes whether an area of a macroblock-based shape generated for the video object is
 3 substantially similar to the area of the generated bounding box.

1 9. The video object encoding system of claim 8, wherein the predetermined criterion
 2 includes whether the area of a macroblock-based shape is larger than the area of the video
 3 object shape.

1 10. The video object encoding system of claim 1, further comprising an MPEG-4
 2 encoder.

1 17. The program product of claim 13, wherein the predetermined criterion includes
2 whether an area of the video object shape is substantially similar to an area of a generated
3 bounding box.

1 18. The program product of claim 17, wherein the predetermined criterion includes
2 whether an area of a macroblock-based shape generated for the video object is
3 substantially similar to the area of the generated bounding box.

1 19. The program product of claim 18, wherein the predetermined criterion includes
2 whether the area of a macroblock-based shape is larger than the area of the video object
3 shape.

1 20. A method for encoding video objects in an object based video communication
2 system, comprising the steps of:
3 evaluating a video object using a predetermined criterion; and
4 generating one of a plurality of mask types for the video object based on the
5 evaluation of the video object.

1 21. The method of claim 20, wherein the plurality of mask types includes a pixel-based
2 mask, a bounding box mask, and a macroblock-based mask.

1 22. The method of claim 20, wherein the predetermined criterion examines a shape of
2 the video object.

1 23. The method of claim 20, wherein the predetermined criterion examines a texture of
2 the video object.

1 24. The method of claim 20, wherein the predetermined criterion examines motion
2 information regarding the video object.

1 25. The method of claim 22, wherein the evaluating step includes determining if the
2 shape is substantially circular.

1 26. The method of claim 22, wherein the evaluating step includes:
2 generating a bounding box; and
3 determining if an area of the object shape is substantially similar to an area of the
4 generated bounding box.

1 27. The method of claim 26, wherein the evaluating step includes:
2 generating a macroblock-based shape; and
3 determining whether an area of the macroblock-based shape is substantially
4 similar to the area of the generated bounding box.

1 28. The method of claim 27, wherein the evaluating step includes determining whether
2 the area of a macroblock-based shape is larger than the area of the object shape.